

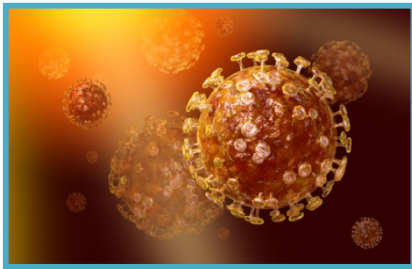
# MERS Fact Sheet

Middle East Respiratory Syndrome (MERS) is a respiratory disease caused by Middle East Respiratory Syndrome Coronavirus (MERS-CoV). MERS-CoV is a novel coronavirus first identified in Saudi Arabia in 2012 and was originally called human coronavirus-Erasmus Medical Center (HCoV-EMC). Patients infected with MERS frequently develop a severe acute respiratory illness especially in those with weakened immune systems and chronic diseases.

## General Information

### *Virology*

MERS-CoV is a member of the *Coronaviridae* family and the *Coronavirinae* subfamily. The family consists of enveloped (easy to kill viruses), positive-stranded RNA viruses. MERS-CoV is comparable to severe acute respiratory syndrome coronavirus (SARS-CoV).



### *Clinical manifestations*

Patients infected with MERS-CoV typically generate acute pneumonia causing symptoms such as:

- Fever
- Cough
- Shortness of breath

Additionally, gastrointestinal symptoms and renal failure can develop. The infection has a fatality rate of 30-40%, however most people who have died from MERS had an underlying medical condition. In fact, people with pre-existing medical conditions may be more likely to become infected with MERS or have a severe case. On the other hands, some people infected have mild symptoms such as cold-like symptoms or no symptoms at all.

### *Epidemiology of transmission*

MERS-CoV is a zoonotic virus that can be transmitted to humans via both animals and humans. Evidence indicates that MERS-CoV originated from camels in Africa and the Middle East. The recent epidemics of MERS point toward the pathogen spreading globally via human to human transmission. The mode of primary infection is thought to be through direct contact with infected camel saliva, milk or uncooked meat. Secondary infections are suspected to occur through direct contact and respiratory secretions from coughing. MERS-CoV has been shown to spread from infected individuals through close contact to care-giver and in healthcare settings. The incubation period is variable and ranges between 2-13 days.

### *Basic Prevention*

There is currently no vaccine to prevent MERS-CoV infection. Everyday prevention measures should be taken to prevent the transmission of MERS including:

- Practicing hand hygiene using soap and water or >60-90% alcohol based hand sanitizer
- Sneezing and/or coughing into a clean tissue
- Avoid touching eyes, nose, and mouth
- Clean and disinfect high touch surfaces

When travelling to countries with reported cases of MERS, avoid being in close contact with camels and do not ingest camel milk or under-cooked camel meat.



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## Infection Prevention and Control Measures

### *Facility Prevention Measures*

In addition to Routine / Standard Precautions, Droplet, Contact and Airborne Precautions should be implemented with patients who are suspected or confirmed to have MERS.

- Patients with suspected or confirmed MERS-CoV infection must be immediately isolated in Airborne Infection Isolation Rooms (AIIR) which are single patient rooms at negative pressure relative to the surrounding areas.
- Use gowns, gloves, and eye protection when in contact with, or caring for patients who are symptomatic with MERS-CoV infection for all interactions that may involve contact with the patient or potentially contaminated areas in the patients environment.
- Follow hand-hygiene guidelines by either carefully washing hands with soap and water or using Alcohol-Based Hand Sanitizers (ABHS) after contact with patients with MERS-CoV infection.
- HCP who care for patients with MERS-CoV should be monitored. They should report any symptoms of acute illness to their supervisor for 2 weeks after the last known contact with a MERS CoV patient.

### *Environmental Control Measures*

Coronaviruses are enveloped viruses (easy to kill) meaning they are very susceptible to EPA and Health Canada approved Hospital grade disinfectants with a virucidal claim. MERS-CoV can survive up to 3 hours on dry, inanimate surfaces.

Standard cleaning and disinfection procedures are appropriate for MERS-CoV in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed. All horizontal and frequently touched surfaces should be cleaned daily and when soiled. Once the patient vacates a room, unprotected individuals should not be allowed in that room until time has elapsed for air flow to remove any infectious particles.

## References:

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